

IGF2BP3 (DE-7): sc-100766

BACKGROUND

Insulin like growth factor 2 mRNA binding proteins (IGF2BPs) bind RNA and influence RNA synthesis and metabolism. IGF2BP1, also known as coding region determinant-binding protein/insulin-like growth factor II mRNA-binding protein (CRD-BP), IMP1 or VICKZ1; IGF2BP2 (IMP2, VICKZ2, p62); and IGF2BP3 (IMP3, KOC1, VICKZ3) contain a unique combination of RNA recognition motifs and four hnRNP K homology domains. IGF2BP1 is abundant in embryonal tissues and is expressed in 81% of colon cancers, 73% of sarcomas and 58.5% of breast cancers. It recognizes c-Myc, IGF-II and t mRNAs, and H19 RNA, and plays a major role in proliferation of K-562 cells by an IGF-II-dependent mechanism. IGF2BP2 binds the 5' UTR of IGF-II mRNA and influences tumor cell growth, in which IGF2BP2 is associated with apoptosis induced by tretinoin. IGF2BP3 knockdown by RNA interference decreases levels of IGF-II protein without affecting IGF-II, c-Myc, or β Actin mRNA and H19 RNA levels. IGF2BP3 is a marker for carcinomas and high-grade dysplastic lesions of pancreatic ductal epithelium.

REFERENCES

1. Leeds, P., et al. 1997. Developmental regulation of CRD-BP, an RNA-binding protein that stabilizes c-Myc mRNA *in vitro*. *Oncogene* 14: 1279-1286.
2. Ioannidis, P., et al. 2001. c-Myc and IGF-II mRNA-binding protein (CRD-BP/IMP-1) in benign and malignant mesenchymal tumors. *Int. J. Cancer* 94: 480-484.
3. Ioannidis, P., et al. 2003. 8q24 Copy number gains and expression of the c-Myc mRNA stabilizing protein CRD-BP in primary breast carcinomas. *Int. J. Cancer* 104: 54-59.
4. Liao, B., et al. 2004. Targeted knockdown of the RNA-binding protein CRD-BP promotes cell proliferation via an Insulin-like growth factor II-dependent pathway in human K-562 leukemia cells. *J. Biol. Chem.* 279: 48716-48724.
5. Ping, S., et al. 2005. Effect of all-*trans*-retinoic acid on mRNA binding protein p62 in human gastric cancer cells. *Int. J. Biochem. Cell Biol.* 37: 616-627.
6. Liao, B., et al. 2005. The RNA-binding protein IMP-3 is a translational activator of Insulin-like growth factor II leader-3 mRNA during proliferation of human K-562 leukemia cells. *J. Biol. Chem.* 280: 18517-18524.
7. Ioannidis, P., et al. 2005. CRD-BP/IMP-1 expression characterizes cord blood CD34⁺ stem cells and affects c-Myc and IGF-II expression in MCF7 cancer cells. *J. Biol. Chem.* 280: 20086-20093.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: IGF2BP3 (human) mapping to 7p15.3; Igf2bp3 (mouse) mapping to 6 B2.3.

SOURCE

IGF2BP3 (DE-7) is a mouse monoclonal antibody raised against recombinant IGF2BP3 of human origin.

PRODUCT

Each vial contains 200 μ l ascites containing IgM with < 0.1% sodium azide.

APPLICATIONS

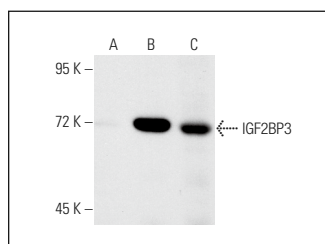
IGF2BP3 (DE-7) is recommended for detection of IGF2BP3 of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:5000).

Suitable for use as control antibody for IMP-3 siRNA (h): sc-60846, IMP-3 siRNA (m): sc-60847, IMP-3 shRNA Plasmid (h): sc-60846-SH, IMP-3 shRNA Plasmid (m): sc-60847-SH, IMP-3 shRNA (h) Lentiviral Particles: sc-60846-V and IMP-3 shRNA (m) Lentiviral Particles: sc-60847-V.

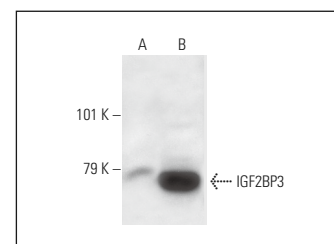
Molecular Weight of IGF2BP3: 69 kDa.

Positive Controls: IGF2BP3 (m): 293T Lysate: sc-121055, K-562 whole cell lysate: sc-2203 or IGF2BP3 (h): 293T lysate: sc-117068.

DATA



IGF2BP3 (DE-7): sc-100766. Western blot analysis of IGF2BP3 expression in non-transfected 293T: sc-117752 (A), mouse IGF2BP3 transfected 293T: sc-121055 (B) and K-562 (C) whole cell lysates.



IGF2BP3 (DE-7): sc-100766. Western blot analysis of IGF2BP3 expression in non-transfected: sc-117752 (A) and human IGF2BP3 transfected: sc-117068 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.